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SCHLUMBERGER RESERVOIR COMPLETIONS 14910 AIRLINE ROAD ROSHARON, TX 77583				ANDREWS, DAVID L
ART UNIT		PAPER NUMBER		
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/711,820

Filing Date: October 07, 2004

Appellant(s): ROUEN, ROBERT P.

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Dan C. Hu  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/10/2010 appealing from the Office action mailed 3/10/2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 1-2, 4-11, 13-16, 18-20 and 22-31 have been finally rejected.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

### **(8) Evidence Relied Upon**

2,894,587	MCCULLOCH	7-1959
4,708,595	MALONEY ET AL	11-1987
5,031,697	WELLINGTON ET AL	7-1991

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 4-11, 13-15, and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Maloney et al. (US 4,708,595). McCulloch discloses a gas injection tool, system and method comprising: a tubular member (40) defining an axial bore therethrough, the axial bore adapted to deliver a gas into a wellbore proximate a perforation interval via an orifice (col. 3, line 51-52, injection of any fluid; col. 4, lines 32-40, may be any length proximate the perforations as shown), wherein the gas injection tool is separate from and not in contact with a tubing string for removing fluid from the wellbore (fig 1); wherein the tubular member is configured to engage a sealing mechanism (23) that seals the wellbore above the perforation interval

(fig 1); wherein the tubular member is adapted to inject a gas proximate the perforation interval of a gas-bearing or oil bearing well (would equivalently work with either); a retrieving element (48) attached to the tubular element; a tubular string (22) adapted to produce fluid from the perforation interval via one port in the sealing mechanism (fig 1); wherein the sealing mechanism is a dual port packer (fig 1); and wherein the tool is configured to be deployable into the wellbore separately from the tubing string (fig 1).

McCulloch does not disclose a plurality of gas lift valves on the tool. Maloney et al. disclose a gas injection tool, system and method comprising a sidestring (28) through a dual port packer, wherein the sidestring has a plurality of gas lift valves (30) which are adapted to regulate communication, via orifices, from the axial bore of the sidestring to the wellbore at or below a perforation interval (fig 1, 21 is open to wellbore fluids) and are configured to be opened in response to application of pressure applied by a flow of gas injected into the axial bore of the tubular member (col. 3, lines 28-37), wherein the gas is injected through each of the gas lift valves that is opened to assist production of fluid from the wellbore (col. 1, lines 50-58, col. 4, lines 32-34); wherein the tubular string comprises one or more gas lift valves (36) for injecting a gas into the well at a location above the sealing mechanism, wherein the gas lift valves are arranged on a side of the tubular to enable injected gas to pass in a radial direction of the tubular member into the wellbore through corresponding orifices (fig 1), wherein the gas lift valves are separate from the tubular string (col. 4, lines 30-33). It would have been obvious to one of ordinary skill in the art to include multiple orifices with gas lift valves on the injection tool and production string of McCulloch, as taught by Maloney et al., in

order to provide additional production assist means since combining prior art elements according to known techniques to yield predictable results is considered obvious to one of ordinary skill.

Claims 16, 18-20, 22, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Maloney et al. (US 4,708,595) and further in view of Wellington et al. (US 5,031,697). McCulloch and Maloney et al. disclose all the limitations of these claims, as applied to claims 1 and 7 above, except for teaching that the valves are actuated at different pressures, or that a valve is closed once another is opened, although Maloney does disclose that the valves would be arranged according to methods known in the art (col. 3, lines 35-45). Wellington et al. teach that known methods of operating gas lift in a well include opening a first valve in response to a first pressure and a second valve in response to a second, different pressure (col. 2, lines 67-68); wherein once a second valve is opened, the first closes (col. 3, lines 4-6); and wherein the valves are configured to sequentially activate (col. 3, lines 1-4). It is noted that the gas lift valves of Wellington are on the production tubing above the perforations, but the teachings as applicable to any gas lift system are considered equivalently relevant to the system of Maloney et al. since the principles of operation are the same. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to operate the valves of Maloney et al. as applied to the system and methods of McCulloch, as is known in the art and taught by Wellington,

since applying a known technique to a known device where the result yields a predictable result is considered obvious to one of ordinary skill.

#### **(10) Response to Argument**

##### **A. Claims 1, 2, 4-11, 13-15 and 24-30 as rejected under McCulloch in view of Maloney**

###### Claims 1, 2, 4-6, 24 and 26.

Appellant argues that the obviousness rejection under McCulloch and Maloney is erroneous because the valves of Maloney are part of a production string rather than a an injection tool and that the teachings of Maloney contradict the subject matter of claim 1 because the claims recite that the injection tool is separate from and not in contact a tubing string. The examiner disagrees that the combination of references fails to obviate the claimed invention. One of ordinary skill would recognize that the valves of Maloney regulate flow from the sidestring (28) to the production string (21) and that their placement on the production string, as opposed to the sidestring is arbitrary to their operation as regulating flow. Although the specification of Maloney describes the valves as part of the production string (col. 3, lines 28-32), the valves as shown in the drawings are outside the production string (valves 30, the figure). One of ordinary skill would recognize that in the system of Maloney, the valves would perform equivalently for their intended function regardless of which string they are physically on, as long as they are intermediate a flow from the sidestring to the production string. As applied to the

primary reference McCulloch, the valves would necessarily be placed on the injection tool (40) because the production tubing (22, used for production, col. 4, lines 24-32) does not extend below the packer (as similar to instant invention).

Appellant further argues that the combination as presented by the examiner because neither McCulloch nor Maloney provide any hint of providing a gas lift valve on an injection tool that is separate and not in contact with a tubing string. While neither reference alone discloses a gas lift valve on an injection tool that is separate and not in contact with a tubing string, the combination of references as above would suggest such to one of ordinary skill in the art. The primary reference McCulloch teaches an assembly including a production string (22) and injection tool (40) that is separate from and not in contact with the production string (fig 1) and may be used for production and injection of fluids (col. 4, lines 24-31). The theory of gas lift production is well known in the art (e.g. ¶¶'s 13 and 14 instant specification as filed) where fluid (gas) is injected into a producing wellbore in order to lift production fluids. The secondary reference Maloney teaches a gas lift production wherein a gas from sidestring (injection tool) is flowed through gas lift valves (unloading valves 30, col. 1, lines 55-59) into a production string. One of ordinary skill would be motivated to improve the system and method of McCulloch, when it's being used for an injection and production operation (col. 4, lines 24-31), with the gas lift valves of Maloney, in order to provide the structures necessary to effect such an operation.

Appellant further argues that a modification of McCulloch as proposed by the examiner with the teachings of Maloney would render McCulloch inoperative for its

intended purpose because the gas lift valves on the tubular member would make it impossible for the member to pass through the passageway (30) of the packing member since the gas lift valves would increase the diameter of the member. The examiner disagrees that one of ordinary skill in the art would be so limited in making the combination. One of ordinary skill would have good reason and the skill to choose valves and an engineering solution which would allow the member to pass its passageway and provide a sealing engagement. It is noted that in appellants own drawings (e.g. fig 1), the valves appear too large to fit within the packer passageway with the tubular, and that if one of ordinary skill in the art could not incorporate the valves as taught by Maloney onto the tubular of McCulloch, it is also presented that this same one of ordinary skill would be unable to make the device as instantly disclosed and claimed.

Claim 15.

Appellant argues that claim 15 recites the valves are "arranged on a side" of the tubular member and no reference teaches such a limitation. While the exact limitation may not be found, the examiner disagrees that such an arrangement would not be obvious because one of ordinary skill would have no choice other than placing the valves on a side of the tubular member (injection tool). Although the specification of Maloney describes the valves as part of the production string (col. 3, lines 28-32), the valves as shown in the drawings are outside the production string (valves 30, the figure). One of ordinary skill would recognize that in the system of Maloney, the valves

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would perform equivalently for their intended function regardless of which string they are physically on, as long as they are intermediate a flow from the sidestring to the production string. As applied to the primary reference McCulloch, the valves would necessarily be placed on the injection tool (40) because the production tubing (22, used for production, col. 4, lines 24-32) does not extend below the packer (as similar to instant invention).

Claim 25.

Appellant argues that claim 25 recites that the gas lift valves are "separate" from the tubing string and no reference teaches such a limitation. The examiner again disagrees that this limitation would not be obvious to one of ordinary skill in the art. The placement of the gas lift valves on the tubular member (injection tool) would place valves as "separate" from a tubing string (production string).

Claims 7-11, 14, 28, 30

Appellant's arguments toward these claims are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

Claim 27

Appellant's arguments toward this claim are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

Claim 13

Appellant's arguments toward this claim are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

Claim 29

Appellant's arguments toward this claim are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

**B. Claims 16, 18-20, 22, 23 and 31 as rejected under McCulloch in view of Maloney and further in view of Wellington**

Claims 22, 23, 31.

Appellant's arguments toward these claims are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

Claims 16, 18-20.

Appellant's arguments toward these claims are similar to those above, and therefore the examiner disagrees also for the same reasoning as above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/David J. Bagnell/  
Supervisory Patent Examiner, Art Unit 3672

/DLA/ David Andrews  
10/6/2010

Conferees:

David Andrews /DLA/

David Bagnell /DJB/

Marc Jimenez /MJ/